

# Unit Planning Guide: Grade   1   Unit   3   of   4

<b>Unit Title:</b> Addition and Subtraction in Base Ten	<b>Pacing (Duration of Unit):</b> 10 weeks
<b>Grade:</b> 1	<b>Buffer Day(s):</b> 2

## Desired Results

### Transfer Goals (Priority practice standards in **bold**)

*Students will be able to independently use their learning to:*

- MP.1. **Make sense of problems and persevere in solving them.**
- MP.2. **Reason abstractly and quantitatively.**
- MP.3. **Construct viable arguments and critique the reasoning of others.**
- MP.4. **Model with mathematics.**
- MP.5. **Use appropriate tools strategically.**
- MP.6. Attend to precision.
- MP.7. Look for and make use of structure.
- MP.8. Look for and express regularity in repeated reasoning.

### Established Goals (2011 MA Curriculum Frameworks Standards Incorporating the Common Core State Standards)

#### Prerequisite Standards:

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#### Standards (Priority Standards in **bold**):

#### **Operations and Algebraic Thinking 1.OA**

#### **Represent and solve problems involving addition and subtraction.**

1. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations

#### **WIDA for English Language Learners**

Standard 1: ELLs **communicate** for **Social** and **Instructional** purposes within the school setting

Standard 3: ELLs **communicate** information, ideas and concepts necessary for academic success in the content area of **Mathematics**

In the lesson planning stage, teachers will need to differentiate lessons for ELLs. In order to accomplish this they will need: 1.) this curriculum map, 2.) a list of their ELLs and their proficiency levels, and 3.) appropriate language function expectations and scaffolds or supports.

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with a symbol for the unknown number to represent the problem.<sup>9</sup>

2. **Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.**

Add and subtract within 20.

6. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use mental strategies such as counting on; making ten (e.g.,  $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$ ); decomposing a number leading to a ten (e.g.,  $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$ ); using the relationship between addition and subtraction (e.g., knowing that  $8 + 4 = 12$ , one knows  $12 - 8 = 4$ ); and creating equivalent but easier or known sums (e.g., adding  $6 + 7$  by creating the known equivalent  $6 + 6 + 1 = 12 + 1 = 13$ ).

### Number and Operations in Base Ten 1.NBT

Understand place value.

2. **Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:**
  - a. 10 can be thought of as a bundle of ten ones—called a “ten.”
  - b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
  - c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).

Use place value understanding and properties of operations to add and subtract.

4. Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.
5. **Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.**
6. **Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. 3**

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## Meaning (\*Mostly assessed through Performance Tasks/Assessments)

**Big Ideas:** (Statements and concepts written in teacher friendly language which reflect the important [but not obvious] generalizations we want students to be able to arrive at. These are used by the teacher to focus daily instruction.)

- The whole number system describes place value relationships within and beyond 100 and forms the foundation for efficient algorithms.
- Number relationships can be used to solve addition and subtraction problems
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**Essential Questions:** (Questions which frame ongoing and important inquiries about the big ideas. They are written for students and used in daily instruction to help engage students in meaningful thinking.)

- Can numbers always be related to tens?
- How does a position of a digit affect its value?
- What strategies can we use to solve word problems?
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## Acquisition (\*Mostly assessed through traditional summative assessments)

**Knowledge:** Key basic concepts, facts, and key terms (written in phrases) students should be able to recall independently.

*Students will know ...*

- Addition and subtraction can be used to solve word problems
- Numbers can be represented by tens and ones
- The relationship between addition and subtraction

**Key Vocabulary:**

- Number sentence

**Skills:** The discrete skills and process students should be able to use independently.

*Students will be skilled at:*

- Making models to solve word problems with up to three addends. (Applying)
- Composing numbers by modeling with manipulatives. (Applying)
- Explaining their reasoning when solving mental math problems (Understanding)
- Explaining their reasoning when using concrete models and drawings. (Understanding)
- Using addition and subtraction to find unknowns within 100. (Applying)
- Mentally adding ten more and ten less (Remembering)
- Subtracting multiples of ten (range 10-90) (Remembering)

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Resource Suggestions: